In the claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (currently amended) The method of manufacture of thin film magnetic disks and other planar magnetic memory devices of the type which include a metal substrate which carries a thin magnetic film deposited on the surface of an electroless plated nickel alloy layer, the improvement comprising the steps of providing a metal substrate having a cold worked surface, characterized by microstructural mechanical variations at and below the surface resulting from smoothing processes and with an average surface roughness of less than about 30 Angstroms, and vacuum-sputter deposition of a thin metallic layer onto the surface of the substrate, said thin metallic layer selected to bind to the substrate, thereby masking ~~chemical and~~ said microstructural mechanical variations of the substrate, and to reactively or catalytically nucleate the electroless plating of said nickel alloy in a subsequent wet chemistry step, depositing a nickel alloy layer by electroless plating on said thin metallic layer, the nickel alloy layer having surface roughness essentially unchanged from that of the cold worked surface of the metal substrate upon completion of the electroless plating, preparing the nickel alloy layer if necessary for formation of a magnetic layer thereon, and depositing a magnetic layer over the nickel alloy layer.

2. (previously presented) The method of claim 1 in which the substrate is an aluminum alloy and the nickel alloy layer is a nickel-phosphorus alloy.

3. (original) The method of claim 1 in which the reactive nucleating layer is a sacrificial reactive metallic layer of zinc.

4. (original) The method of claim 1 in which the catalytically nucleating metallic layer is a non-magnetic nickel-phosphorus alloy or a non-magnetic alloy of iron or of cobalt or of nickel in combination with singly or multiply added alloying materials.

5. (previously amended) The method of claim 1 in which said nucleating metallic layer comprises a first thin non-magnetic binder layer which bonds to the substrate and a top second

non-magnetic thin layer which bonds to the first layer and which nucleates the electroless plating of the nickel alloy either reactively, or catalytically.

6. (previously presented) The method of claim 5 in which the thin binder layer is selected from the group comprising chromium, titanium, alloy mixtures of chromium and titanium, alloy mixtures of chromium and vanadium and, alloy mixtures of titanium and tungsten.

7. (original) The method of claim 5 in which said binder layer is selected from the group comprising zirconium, niobium, rhenium, vanadium, molybdenum, tungsten, chromium, nickel, copper, titanium, silicon or alloy combinations of these elements.

8. (original) The method of claims 1 or 5, wherein said substrate is an aluminum alloy.

9. (canceled)

10. (previously presented) The method of claims 1 or 5 in which the substrate is a light-weight high-strength metal selected from the group of magnesium and its alloys or titanium and its alloys or other non-magnetic alloys as typified by beryllium copper, manganese steel and austenitic stainless steels.

11-12. (canceled)

13. (original) The method of claims 1 or 5 wherein said substrate has a first side and a second side, and said nucleating layer is applied to only said first side of said substrate.

14. (original) The method of claim 1, wherein the average surface roughness is about 20 Angstroms or less.

15-32. (canceled)

33. (previously presented) The method of claim 1, including polishing said layer of said nickel alloy.

34. (previously presented) The method of claim 1, including polishing said layer of said nickel alloy, forming a chromium layer on said layer of nickel alloy, and forming a magnetic layer on said chromium layer.

35. (previously presented) The method of claim 5 in which the first thin, non-magnetic binder layer promotes adhesion between the substrate and the top second non-magnetic thin layer.

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